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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,829	11/29/2001	Ryoji Yoneyama	S004-4487	6397

7590 04/01/2005
ADAMS & WILKS
31st Floor
50 Broadway
New York, NY 10004

EXAMINER

MOHANDESI, IRAJ A

ART UNIT PAPER NUMBER

2834

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,829

Applicant(s)

YONEYAMA ET AL.

Examiner

Iraj A Mohandesi

Art Unit

2834

SM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/29/2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is to respond to the letter dated 09/22/2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oku US patent 6,097,121** in view of **Saban US patent 5,894,182** and **Matsuzawa US patent 6,628,037**.

Oku'121 discloses a spindle motor (Fig.1) comprising: a rotary body (18 hub) rotating with an axis of rotation (20 shaft) thereof being centered, a magnet (12) mounted on the body of rotation, a coil (54) generating the varying magnetic field acting on the magnet, and a core (52) formed by a plurality of doughnut-like magnetic steel each with a plurality of protrusions (Fig.4) provided on a periphery for winding wire of the coil (54, see Fig.4).

Oku'121 teaches all limitation of claimed invention except, for a core with a specified thickness is formed by laminating thinnest steel sheet with thickness of 0.15 mm to 0.35 mm and 0.2 having riveting portions fitted in another steel sheet.

Saban'182 discloses a motor with laminated core having riveting portions (38, 48, see Fig.1), which is fitted in another steel sheet for the purpose of holding the laminated sheets together.

Art Unit: 2834

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine **Oku'121** motor with a laminated core having riveting portions, as taught by **Saban'182** for the purpose mentioned above.

With regard to the limitations in claims 1,2,3,5 and 6 **Matsuzawa'037** discloses an electric machine having laminating stator core thickness of approximately 0.38 mm. (see column 11, line 34)

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine **Oku'121** with laminating stator core thickness of approximately 0.38 mm for the purpose of reducing the eddy current as taught by **Matsuzawa'037** for the purpose mentioned above

It would have been also obvious to one having ordinary skill in the art at the time the invention was made to provide a core with a specified thickness is formed by laminating thinnest steel sheet with thickness of 0.15 mm to 0.35 mm and 0.2 for the purpose of reducing iron losses, since it has been held that where the general condition of the claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art.

In re Aller, 105 USPQ 233.

With regard to claim 7 and 11 the method of forming the riveting portion is inherent to disclosed structure.

With regards to claims 8-10,15-18 ,**Oku'121** discloses a spindle motor (Fig.1) comprising: a rotary body (18 hub) rotating with an axis of rotation (20 shaft) , a

Art Unit: 2834

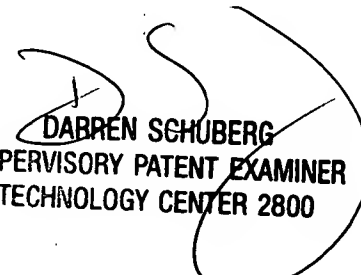
frame(4) and a sleeve (8) fixedly mounted to the frame and defining a cylindrical opening (30); wherein the rotary body comprises a shaft (20) rotatably disposed in the cylindrical opening of the sleeve and a hub (18) fixedly mounted at one side of the shaft the cylindrical opening such that a gap (38) is defined between adjacent walls of the rotatable shaft, the sleeve, and the frame, further comprising lubricating oil disposed in the gap (38 ,see column 5,lines 21-24).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is 571-272-2028. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IM March 29, 2005


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800